Total Maximum Daily Load (TMDL) Program

Note: This information is provided for reference purposes only. Although the information provided here was accurate and current when first created, it is now outdated.

Notice of Public Meeting on Total Maximum Daily Loads

February 19-21 in Galveston, TX

[Federal Register: January 23, 1997 (Volume 62, Number 15)]
[Notices]
[Page 3510]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]

ENVIRONMENTAL PROTECTION AGENCY
[FRL-5680-2]

National Advisory Council for Environmental Policy and Technology-
Total Maximum Daily Load Committee; Public Meeting

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of public meeting.

SUMMARY: Under the Federal Advisory Committee Act, PL 92463, EPA gives notice of a three day meeting of the National Advisory Council for Environmental Policy and Technology's (NACEPT) Total Maximum Daily Load (TMDL) Committee. NACEPT provides advice and recommendations to the Administrator of EPA on a broad range of environmental policy issues. The TMDL Committee has been charged to provide recommendations for actions which will lead to a substantially more effective TMDL program. This meeting is being held to enable the Committee and EPA to hear the views and obtain the advice of a widely diverse group of stakeholders in the national Water Program.

In conjunction with the three day meeting, the FACA Committee members and the EPA will host two meetings designed to afford the general public greater opportunity to express its views on TMDL and related water issues.

DATES: The three day public meeting will be held on Wednesday, February 19-21, 1997, in Galveston, Texas at the Galveston Island Hilton Hotel, 5400 Seawall Boulevard, Galveston, Texas. All sessions are scheduled for the Crystal Salon, Sections B and C. The meeting on Wednesday, February 19, 1997, begins at 1:00 p.m. with adjournment scheduled for 5:00 p.m. The meeting on Thursday, February 20, 1997, begins at 9:00 p.m. with adjournment scheduled for 3:00 p.m. The closing day of the meeting is Friday, February 21, 1997 from 9:00 a.m. until 5:00 p.m.

The two public input sessions are scheduled in conjunction with the full Committee meeting in the same location. The first will occur on Wednesday, February 19, 1997, from 7:30-9:00 p.m. The second will occur on Thursday, February 20, 1997, from 3:30-5:00 p.m.

FUTURE MEETING DATES: The Committee has scheduled additional meetings for the following dates and locations:

June 11-13, 1997 in Wisconsin (Madison or Milwaukee)
September 3-5, 1997 in Portland, Oregon
January 21-23, 1998 in Salt Lake City, Utah

ADDRESSES: Materials or written comments may be transmitted to the Committee through:

Corinne S. Wellish, Designated Federal Official
NACEPT/TMDL
U.S. EPA Office of Water
Office of Wetlands, Oceans, and Watersheds
Assessment and Watershed Protection Division (4503F)
401 M Street, SW.
Washington, DC 20460

FOR FURTHER INFORMATION CONTACT: Corinne S. Wellish, Designated Federal Official for the Total Maximum Daily Load Committee at 202-260-0740.

Dated: January 15, 1997.
Corinne S. Wellish,
Designated Federal Official.
[FR Doc. 97-1645 Filed 1-22 97; 8:45 am]
BILLING CODE 6560-50-P

Total Maximum Daily Load (TMDL) Program

FEDERAL ADVISORY COMMITTEE ON TMDLs

Proposed Agenda for 2nd Meeting
February 19-21, 1997
Galveston Island Hilton, Galveston, TX

Wednesday, February 19, 1997

MEETING KICK-OFF

1:00 PM Welcome, Introduction, and Agenda Review

1:15 PM EPA Update: New Developments Affecting the TMDL Program

2:00 PM Presentation and Panel Discussion: State Perspectives on the TMDL Program

- State Presentations
- Questions and Answers

3:30 PM Break

FRAMEWORK WORKGROUP REPORT

4:00 PM TMDL Program Framework Workgroup: Presentation on Proposed Vision and Mission

5:00 PM Break for Dinner

PUBLIC COMMENT PERIOD

7:30 PM Public Comment Period: Session I

9:00 PM Adjourn

.

Thursday, February 20, 1997

FRAMEWORK WORKGROUP REPORT, *Continued*

9:00 AM Discussion of Framework Workgroup Presentation

10:30 AM Break

LISTING WORKGROUP REPORT

10:50 AM Listing Workgroup Presentation: Review Issues and Options

12:00 PM Lunch

1:15 PM Discussion of Listing Workgroup Presentation

3:00 PM Break

PUBLIC COMMENT PERIOD

3:30 PM Public Comment Period: Session II *[Note: if public comment ends early, the Committee may proceed with other agenda items]*

5:00 PM Adjourn

Friday, February 21, 1997

SCIENCE AND TOOLS WORKGROUP REPORT

9:00 AM Science and Tool Workgroup Presentation: Issues and Options

10:30 AM Break

10:50 AM Discussion of Science and Tools Workgroup Presentation

12:30 PM Lunch

1:45 PM Workgroup Process Review

- Brief Report from Workgroup on Criteria for Approval and Workgroup on Management and Oversight
- Review of Workgroup Assignments
- Workgroup Procedures and Schedules

2:50 PM Wrap-up and Next Steps

- Plans/Agenda for Meeting 3
- Public Participation
- General Process Check

4:30 PM Adjourn

Saturday, February 22, 1997

OPTIONAL FIELD TRIP FOR COMMITTEE MEMBERS AND EPA

9:00 AM

Total Maximum Daily Load (TMDL) Program

February, 1997

FACT SHEET
WATER QUALITY STANDARDS -- BIOCRITERIA

The CWA directs EPA to work with States and Tribes to restore and maintain the biological integrity of our Nation's surface waters. Biological integrity is defined as a balanced, integrated, adaptive community of organisms having a species composition, diversity and functional organization comparable to that of the natural habitat of the region. One of EPA's long range strategies to achieve better protection of the nation's water resources is the effective use of biological information in water resource decision making. The Agency recommends States and authorized Tribes follow an iterative phased approach to:

- establish a policy that includes a long term goal to restore and maintain the biological integrity of State and Tribal waters and an implementation plan;
- use biological information to more precisely define designated uses aquatic life uses, and;
- adopt biological criteria in water quality standards.

Biological criteria will be used to assess attainment of designated aquatic life uses, and to guide water quality management decisions. Implementation of this approach relies upon the development of biological assessment methods and criteria that are appropriate for the various designated aquatic life uses. EPA recognizes that the pace and scope of biological criteria implementation will vary as a function of resource and individual jurisdictional needs.

Background

Over the past decades, EPA's initial steps towards protecting and restoring the biological integrity of our water resources focussed on controlling discharges from point sources of pollution. Effluent guidelines were established resulting in direct, end-of-pipe limitations based on technology. Water quality criteria were derived to serve as benchmarks against which ambient pollutant levels could be evaluated when determining attainment of specific designated uses or NPDES permit limitations. Other methods were also developed specifically to measure and control chemical toxicity to aquatic life from point source discharges, e.g., whole effluent toxicity testing (WET). All of these have been highly effective in detecting and controlling many water quality problems and their continued implementation is essential to State and Tribal water quality programs.

However, chemical water quality criteria and WET are predictive measures for preventing in-stream toxicity and have been primarily applied to controlling the discharge of pollutants in effluent from point sources. Chemical contamination from point sources is only one type of stress to aquatic ecosystems. Nonpoint sources pf pollution are also major sources. Under most circumstances, nonpoint sources are more difficult to monitor than point sources of pollution. Direct measures of the aquatic community are needed to better assess the cumulative impacts from these types of stresses. More direct measures of ecosystem health which integrate both multiple species and community response to low magnitude or gradual changes in water quality and physical habitat alteration increase States and Tribes ability to identify impacts and should enhance the protectiveness of water quality programs.

Application of Biocriteria in Water Quality Standards Programs

Biological assessments measure the condition of aquatic communities in a specific water body; biological criteria define the goals for that community. Used together, these tools provide information on the status and function of the aquatic system in response to multiple contaminants and physical alterations of habitat. Biological criteria are designed to measure the cumulative biotic responses to stressors, rather than a concentration or level of a chemical. Thus, biocriteria are especially useful in assessing and measuring attainment of designated aquatic life uses. Biological criteria are narrative expressions, numerical values and/or analytical procedures that describe reference biological conditions of aquatic communities inhabiting waters of a given designated aquatic life use. The attainable biological conditions for a waterbody are established through the State or Tribal adoption of use designations in their water quality standards. However, States and Tribes have the flexibility to utilize a broad range of data and information in selecting and evaluating appropriate reference sites. Adoption of biological criteria into State and Tribal water quality standards will facilitate implementation of the CWA.

EPA's recommendations for application of biological criteria are based on what the criteria are intended to measure, and the most appropriate way for that information to be applied in a water quality program. Often the underlying stressor responsible for non-attainment of designated uses can be identified (e.g., loss of habitat), even if not the source of the stressor cannot (loss of habitat due to sedimentation or erosion). The technical and scientific soundness of biological criteria as an assessment tool for use in regulatory programs has been aptly demonstrated in several State water quality programs. EPA strongly recommends that States and Tribes establish a robust and sound data base when developing biological criteria. EPA recently published technical guidance for developing biocriteria for streams, and is developing technical guidance for other aquatic systems.

Within the permitting process, EPA recommends that biological criteria be used as a means of assessing permit conditions and outcomes, for example, to help in evaluating reasonable potential of effluent discharges and to document the effectiveness of corrective actions. Maine, Ohio, North Carolina, and Florida routinely use biocriteria to make water quality management decisions and to evaluate NPDES permits.

Total Maximum Daily Load (TMDL) Program

February, 1997

FACT SHEET
WHOLE EFFLUENT TOXICITY (WET)

- **Definition:** Whole Effluent Toxicity (WET) is the total toxic effect of an effluent mixture, measured directly with a toxicity test.

- **Use of WET Tests in NPDES:** In order to protect water quality, EPA recommends that WET tests be used together with chemical specific water quality standards. Water Quality Standards (criteria) and WET tests are designed to be used to predict the impact and toxicity of effluents discharged from point sources into waters of the U.S. Both water quality standards (criteria) and WET are based on toxicity tests using aquatic organisms, and determining "safe concentrations" for discharge. Chemical specific standards(criteria)are based on toxicity tests for a specific chemical, while WET tests are designed to be conducted on effluent mixtures. Many chemicals can be more toxic when mixed together, as in an effluent, so it is important to used both types of water quality-based controls on NPDES discharges when necessary.

    - **Permits:** Over 6,500 permits contain either WET NPDES permit limitations (with associated monitoring requirements) or monitoring requirements only.

    - **WET Criteria:** 13 States have adopted numeric criteria for WET. All remaining States have narrative "free from" toxics standards under which they apply WET.

- **WET Test Methods** were promulgated as part of 40 CFR part 136 standard methods in October 1995, which means that if a WET test is required in a permit, the permittee may only use one of the promulgated methods. The promulgated methods for WET include acute (marine and freshwater species) and short-term chronic (for marine and freshwater species) tests. Acute methods measure only mortality as the endpoint and the test is generally conducted for 96 hours or less. The short-term chronic methods generally measure growth and reproduction in addition to mortality as the endpoints, and the test method duration is 9 days or less. Three testing manuals contain all of the above methods and can be down loaded for the OW home page.

Total Maximum Daily Load (TMDL) Program

FEDERAL ADVISORY COMMITTEE ON TOTAL MAXIMUM DAILY LOADS (TMDLs)

Summary of Meeting Two

February 19-21, 1997

Galveston Island Hilton
Galveston, Texas

Contents

Meeting Overview:

This meeting summary describes the discussions and actions that occurred at the second meeting of the Federal Advisory Committee on Total Maximum Daily Loads (TMDLs), held February 19-21, 1997 at the Galveston Island Hilton in Galveston, Texas. The following were the primary outcomes of the meeting:

- The Committee received additional input on the TMDL program and related water quality issues from States, local governments, EPA, and the general public.
- The Committee reviewed and provided suggestions for revising a draft framework for the TMDL program that includes a problem statement and language addressing the vision and mission for the program.
- The Committee received briefings from the Listing, and Science and Tools Workgroups on their activities to date and offered suggestions for the workgroups' continued discussions.

The Committee also discussed process issues (e.g., the Committee's policy on distribution of documents, Committee member substitutes, and lessons learned from workgroup conference calls) and the schedule and goals for upcoming meetings.

Participants:

Committee Members in Attendance:

Bob Adler

Fredric Andes

John Barrett

Nina Bell

J. Brad Burke

Cheryl Creson

Phil Cummings

Dale Givens

L.D. McMullen

William Nielsen

Robert Olszewski

Richard Parrish

Danita Rodibaugh

Melissa Samet

Linda Shead

Susan Sylvester

Lydia Taylor

Ed Wagner

Committee Members Absent:

James Hill
Jane Nishida

Ex-Officio Committee Members in Attendance:

Art Bryant, U.S. Forest Service
John Burt, Natural Resources Conservation Service
Geoff Grubbs, U.S. Environmental Protection Agency

EPA Representatives:

Donald J. Brady, Chief, Watershed Branch, AWPD, OWOW
Theresa Tuano, TMDL Team Member, Watershed Branch, AWPD, OWOW
Corinne S. Wellish, Designated Federal Officer, AWPD, OWOW

Bruce Zander, TMDL Coordinator, Region 8; National Expert on TMDLs

Public Attendance:

Approximately 65 members of the public attended the meeting.

Facilitator:

Martha Prothro, Ross & Associates

Conference Support:

Ross & Associates and Tetra Tech, Inc.

Total Maximum Daily Load (TMDL) Program

FEDERAL ADVISORY COMMITTEE ON TOTAL MAXIMUM DAILY LOADS (TMDLs)

Summary of Meeting Two

February 19-21, 1997

Galveston Island Hilton
Galveston, Texas

Wednesday, February 19, 1997

Welcome, Introductions, and Agenda Review:

Martha Prothro opened the meeting by welcoming the Committee, the state and EPA representatives in attendance, and the general public. Each Committee member, the ex officio members, and the EPA representatives introduced themselves and briefly described their experience with TMDLs. Following these introductions, Ms. Prothro reviewed the goals for the meeting as well as the long-term goals of the Committee. After short discussions, the Committee adopted the proposed agenda and also formally approved the summary of meeting one.

EPA Update: New Developments Affecting the TMDL Program:

Geoff Grubbs, ex officio Committee member and Director of EPA's Assessment and Watershed Protection Division, updated the Committee on new developments affecting the TMDL program. He expressed EPA's appreciation for the hard work that the Committee has already exerted, told the members he felt they were on the right track, and urged them to focus on those recommendations that would prove most useful to EPA. He told the Committee that EPA was most interested in the following:

- Specific recommendations for major policy directions (e.g., regulatory revisions) for the TMDL program on the following issues: listing waters, TMDL development and approval, and implementation.
- Specific recommendations for major priorities and investments (e.g., science, tools,

training, and management systems) needed to support the TMDL program.

Mr. Grubbs acknowledged that issues associated with water quality standards and monitoring cannot be completely divorced from TMDL discussions, but reminded the Committee that there are other advisory groups that have been formed to address these two issues. He asked the Committee to stay focused, as much as possible, on issues specific to the TMDL program (i.e., listing procedures, TMDL development, implementation).

Mr. Grubbs then provided a brief update on several topics and activities related to the TMDL Program and other Office of Water initiatives. These included:

- Reauthorization of the Clean Water Act
  - Unlikely to occur in calendar year 1997
- TMDL-related funding identified in President Clinton's 1998 budget request
  - An additional $13 million has been allocated to TMDL-related efforts ($8 million targeted for investment in science, tools, and training and $5 million for State 106 grants)
  - An additional $5 million has been allocated for nonpoint source investments and $10 million has been targeted for Tribal water quality issues
- The National Watershed Assessment Project
  - EPA project that uses existing data to characterize the conditions of the 2150 watersheds in the continental U.S.; NWAP is scheduled to be available on the Internet in April or May 1997
- Draft TMDL Program Implementation Strategy
  - Comment period closes May 12, 1997
- Status of 1996 TMDL list submittals
  - All States have now submitted their 1996 lists
- Status of ongoing litigation
  - There are currently 24 active cases, with active negotiation occurring in many
  - A settlement has been reached in West Virginia that includes a 10-year schedule for completing TMDLs for all of the state's listed waters

Mr. Grubbs also told the Committee that EPA will be issuing new guidance for the 1998 listing cycle and that there will be several possible new policy directives related to the pace of developing TMDLs and expectations regarding the implementation of TMDLs. Mr. Grubbs concluded by re-emphasizing that his role at the meeting is to provide information to the Committee on current and planned policies and practices and to suggest especially helpful lines of discussion.

Responding to questions, Mr. Grubbs told the Committee it should use the TMDL Reinvention Workgroup report as a good source of raw information, but should realize that the Reinvention Workgroup represented a more narrow range of interests than does this Committee and therefore its recommendations are limited. (Mr. Grubbs also pointed out that the Reinvention Workgroup was unable to reach consensus on a variety of issues.) He also emphasized that the guidance EPA will issue for the 1998 listing cycle will be interim in nature and should not preempt in any way recommendations that might be made by the Committee.

Presentation and Panel Discussion: State Perspectives on the TMDL Program:

Alan Hallom, Georgia Department of Natural Resources, Environmental Protection Division (EPD)

Alan Hallom from Georgia's Department of Natural Resources, Environmental Protection

Division (EPD), summarized Georgia's TMDL issues for the Committee. He described how the state's program has evolved since 1978 and identified what are currently considered the required components of an approvable TMDL. Mr. Hallom also discussed the planning elements of EPD's River Basin Management strategy, especially in regard to its emphasis on public education and involvement.

Mr. Hallom told the Committee that Georgia has more than 500 stream segments on its section 303(d) list of impaired waterbodies and identified the portion of those stream segments that are listed due to various causes (e.g., impaired biological integrity, fecal coliforms, metals, low dissolved oxygen levels, organics, and fish tissues). He also reviewed Georgia's process for developing TMDLs and said that TMDL development costs can range from $75,000 for a small, relatively simple waterbody to $5 million to apply a dynamic water quality model to a 75-mile stretch of the Chatahoochee River near Atlanta. He also said that the only data he had regarding TMDL implementation costs were for a small urban basin where the estimated cost of implementing best management practices to achieve water quality standards is $6 million.

Mr. Hallom mentioned that Georgia has recognized that there is a problem with how some of its streams have been listed (e.g., use of only one data point, difference between how standard is written and measurement is taken) and emphasized that in Georgia most impairments are due to nonpoint sources. He also said that there is a need for better wet weather models and for protocols for developing TMDLs for fecal coliform bacteria. He concluded by pointing out the challenge of working under court-mandated time frames, that the financial impact of developing and implementing TMDLs is significant, and that TMDLs involve complex issues that will require cooperative management approaches.

Walt Poole, Assistant Administrator, Idaho Division of Environmental Quality

Walt Poole next outlined Idaho's efforts to implement its TMDL program. He began by noting that monitoring for and control of nonpoint sources have not generally been a high priority in state legislatures in the West. This has proved problematic since the vast majority of water quality problems in Idaho (and other Western states) are due to nutrients, sediments, and increased stream temperatures associated with nonpoint sources.

Mr. Poole proceeded to summarize the sequence of events associated with the TMDL lawsuit in Idaho. The plaintiffs filed suit in the winter of 1993, challenging EPA's conditional approval of Idaho's list of 32 impaired waterbodies. In turn, the court ordered EPA to draft a revised list of impaired waterbodies in April 1994. In October 1994, EPA submitted a list to the court that consisted of 962 impaired waters. This list was developed based on information in the state's 305(b) report, data available from the U.S. Forest Service and the Bureau of Land Management, and, in some cases, public input that a water was threatened because of proposed land use changes. An initial schedule for completing TMDLs for each of these waters was rejected by the court in May 1996 and a new, five-year schedule was established. Idaho is now in the process of developing, in coordination with EPA, a plan for meeting this five-year schedule.

Mr. Poole identified the logistical challenges that Idaho now faces to meet the court-imposed deadline and summarized a few of the strategies that it is taking to meet this schedule. He also identified several issues which he characterized as being barriers or opportunities (depending on one's perspective) to developing a highly effective TMDL program:

- Data collected by different state and federal agencies are currently not compatible.
- In many Western waters, water quality standards cannot be met because the water has been over-appropriated.
- The priority setting procedures that are used for TMDL development sometimes conflict or overlap with other statutory requirements, such as the Endangered Species Act.

- The public needs meaningful indicators of progress (e.g., the public can understand catchable fish goals better than goals that are expressed as 1 part per million of a certain chemical).

Albert Bromberg, Division of Water, New York Department of Environmental Conservation

Al Bromberg began his presentation by telling the Committee he shared quite a few of the concerns expressed by Mr. Hallom and Mr. Poole. He then provided a brief history of the water quality program in New York and pointed out that the state has been conducting activities essentially equivalent to TMDLs since the 1950s. Mr. Bromberg also discussed the process by which the state gathers data for its 303(d) list submittal and how it prioritizes its list of impaired waters. Key points related to these two activities were:

- The 303(d) submission is derived from two primary sources: water quality data collected by citizen, local agency, and state monitoring programs; and the statewide 305(b) water quality assessment (which includes threatened and impaired waters).
- Priority waters are those where exceedances of standards have been documented. In these waters, management planning approaches are identified and TMDL development is initiated. A phased approach to TMDL development is applied whenever necessary.

Mr. Bromberg also briefly discussed TMDL development activities for several priority waterbodies, including Long Island Sound and Lake Champlain, and used these examples to illustrate the time and expense associated with developing a technically sound TMDL. On the topic of good science, Mr. Bromberg made several points:

- Good science means adequate data and the use of proper tools (models).
- The technical detail and rigor of the analysis is governed by the scale and magnitude of the water quality problem and the resources available.
- The types of analysis used for TMDL development can range from use of desktop models to site specific model development coupled with extensive monitoring programs.
- It is important to look at the different geographic scales associated with TMDL development. Both the cumulative and site-specific effects of a pollutant loading must be evaluated.

Mr. Bromberg closed by underscoring the emphasis placed on implementation of TMDLs in New York and re-iterated that success should be measured by improvement in water quality. He also told the Committee that ambient monitoring programs are essential to an effective TMDL program, but that New York's monitoring program is funded at only 60% of the level it was ten years ago.

Remarks from Other State Representatives

Following Mr. Bromberg's presentation, Ms. Prothro asked if other state representatives in attendance would like to make any comments. **Mike Haire**, Director of the Technical and Regulatory Services Administration for the **Maryland Department of Environment**, listed three issues he would like to have the Committee keep in mind:

- There may be significant implications of having a waterbody listed that may conflict with other statewide policy objectives or approaches. These include the need to address renewal of point source permits and the question of allowing new development that would contribute to nonpoint runoff.
- Many Eastern and Mid-Atlantic states are grappling with the issue of redeveloping "brownfield" sites in urban areas. The process for listing and developing TMDLs

will have important ramifications for these initiatives.
- Maryland has a good history of voluntary agricultural efforts to address water quality concerns and is leery of antagonizing that relationship.

Susan Sylvester, Administrator, Division of Water, for the **Wisconsin Department of Natural Resources**, told the Committee that her state's 1996 TMDL list included 80 segments (one of which was a wetland) and said that six TMDLs have been completed so far. She also said that not all EPA Region 5 states would agree that the Region's primary water quality problems deal with toxics. She explained how Wisconsin has assigned teams to each of its 23 basins and said that most of the state's monitoring has been biological (which doesn't lend itself as well to the TMDL process). She also voiced a concern that many environmental agency staff will be helping county districts prepare Conservation Reserve Program (CRP) plans during the next few months because of the importance of this program to water quality. This will take away from the time they can devote to TMDLs.

Lydia Taylor, Deputy Director, **Oregon Department of Environmental Quality**, told the Committee that her state has been developing approximately two TMDLs per year and that the state is trying to allocate a large amount of money for TMDLs over the next ten years. She also pointed out that one result of the recent litigation has been to motivate state legislatures to pay more attention to water quality problems.

Dale Givens, Secretary, **Louisiana Department of Environmental Quality**, told the Committee that he hoped the state presentations would provide the Committee an appreciation for the complexity involved with the TMDL issue. He said Louisiana was committed to the TMDL process, but that it has to be done in conjunction with good science.

The Committee had several questions for the various state representatives in attendance. Several members wondered what percentage of personnel resources in each state agency are dedicated to TMDLs. Mr. Bromberg said that, excluding persons working on detailed TMDLs such as Long Island Sound, there are approximately six full time staff out of 280 employees in the entire agency. Ms. Sylvestor told the Committee that her office has about four modelers and six or seven other staff that work on TMDLs.

The state representatives were also asked to comment on the degree to which they use public education programs to promote watershed protection. Mr. Bromberg said that New York has an adopt-a-watershed program, Ms. Sylvester said Wisconsin has an adopt-a-stream program, and Ms. Taylor said that Oregon's agriculture department must develop BMPs for impaired waters and that public participation is a key component of that process.

The following observations were expressed by various Committee members on the presentations made the state representatives:

- There appears to be quite a bit of inconsistency among states and between states and EPA in terms of listing procedures.
- It appears that there is too much focus at the state level on getting waters off the 303(d) list rather than on trying to obtain clean water.
- There was too much emphasis in the presentations on the use of expensive, time-consuming TMDLs. The scale of the problem is now driving us toward the use of more simple, desktop TMDLs.

[Note: Some of the discussions on the state presentations took place on Friday morning.]

Framework Workgroup Report:

The Framework Workgroup briefed the Committee on its activities since the meeting in Herndon. The Workgroup provided the Committee with a draft problem statement, vision, and mission statement and outlined the role it hoped to play as the Committee continues its deliberations (e.g., by assisting with overlapping issues and helping to set priorities).

The full Committee had several questions and suggestions for the Framework Workgroup. Much of the discussion involved recommendations for clarifying the problem statement and trying to agree on an approach to identify, in the vision statement, all of the various stakeholders (e.g., how to address the role of local governments and federal agencies other than EPA). The full Committee also discussed how to incorporate issues that it had not yet reached consensus on into the mission statement. These issues included the role of anti-degradation policies and how threatened waters should be addressed by the TMDL program. It was agreed that the Framework Workgroup would revise the draft document based on the comments and that several issues could only be resolved after additional Committee discussion. The following issues are those that the Committee agreed require additional discussion (the workgroup responsible for initially discussing them is identified in parentheses):

- How to address the issue of non-degradation(1) of water quality limited waters? (Listing)
- How should threatened waters be addressed by the TMDL Program? (Listing)
- How should the issue of implementation of TMDLs be addressed? (Approval)
- What is the legal basis for anti-degradation(2) TMDLs? (Framework)

- How comprehensive should the 303(d) list be? (Listing)
- How should the issue of adequate resources (financial and other) be addressed by the Committee? (Framework)

Following the Committee's discussion on the Framework Workgroup report, ex officio members were invited to comment. Among the points made were:

- The new Farm Bill affected several agricultural programs; many of these programs will have relevance to entities attempting to develop TMDLs.
- It is important to keep in mind the need for increased collaboration between all of the federal agencies that are affected by TMDLs.
- The Committee should remember that territories are another category of stakeholders affected by TMDLs (e.g, District of Columbia, Puerto Rico).
- The Committee should be careful in its use of the term "fair." In many respects the Clean Water Act is fundamentally unfair in how it addresses point versus nonpoint sources.
- The document that has been prepared by the Framework Workgroup is necessarily a work in progress. It will change as the Committee begins to identify preferred options for the various issues.

[Note: The discussions on the Framework Workgroup report took place on both Wednesday afternoon and Thursday morning.]

Public Comment Period:

Geoff Grubbs opened the public comment period by welcoming everyone and explaining the role of the FACA Committee in providing recommendations to EPA on how to improve the TMDL program. The Committee members then introduced themselves and Ed Wagner welcomed the public on the Committee's behalf. He explained that, although a broad range of backgrounds and perspectives are represented on the Committee, it is not all-inclusive. The public sessions that will be held at this meeting and future ones will be an important mechanism the Committee uses to solicit input from others.

*The first public comment was made by **George Oswald** representing the **Texas Water Conservation Association**. Mr. Oswald emphasized the need for a strong technical basis for developing TMDLs that recognizes the combined effects of wet weather conditions and dry weather discharges. He also pointed out the need for accurate modeling methodologies, wet weather water quality standards, and suggested that almost all TMDLs should be phased because of the considerable uncertainty associated with estimating the impacts of runoff.

John Promise, Regional Coordinator of the North Central Texas Governments reminded the Committee to acknowledge the specific role that local governments play in implementing TMDLs. He reminded the Committee that local governments are not the "public" and that they must deal with zoning and other tools needed to implement TMDLs. He also suggested that some water problems cannot be solved by the TMDL process (e.g., waters impaired by banned chemicals such as chlordane) and warned the Committee that a top down approach to water quality problems will not work because of the wide range of climatic conditions across Texas and the rest of the country.

Randall Wilburn, Director of Water Quality Programs for the State of Texas mentioned the need to ensure that valid data underlie the listing process, that a consensus approach to decision making is essential, and that implementation must be a part of a TMDL. He also urged the Committee to consider recommending that Clean Water Act Section 319 and Section 604(b) money be used for TMDL development.

***Jim Kachtick, Manager of the Environmental Southern Region for Occidental Chemical Corporation**, read a statement to the Committee on behalf of the East Harris County Manufacturers Association (EHCMA). The statement summarized the 1996 listing by the Texas Natural Resources Conservation Commission of the Houston Ship Channel-San Jacinto River system as a waterbody potentially impaired by metals. Because EHCMA members were concerned about the reliability of the data underlying the listing decision, they initiated a voluntary monitoring program with the Gulf Coast Waste Disposal Authority and the City of Houston to collect more reliable data. Mr. Kachtick provided this example to show the importance of voluntary, collaborative efforts and the importance of having sound science that supports listing and TMDL development decisions.

*Written comments submitted to the Committee.

***Notes*:**

1. Non-degradation refers to a policy of not allowing any permits for new discharges to section 303(d) listed waters for which TMDLs have not yet been developed.

2. Anti-degradation policies are part of each state's water quality standards. These policies are designed to protect water quality and provide a method of assessing activities that may impact the integrity of the wa terbody. >

Total Maximum Daily Load (TMDL) Program

FEDERAL ADVISORY COMMITTEE ON TOTAL MAXIMUM DAILY LOADS (TMDLs)

Summary of Meeting Two

February 19-21, 1997

Galveston Island Hilton
Galveston, Texas

Thursday, February 20, 1997

Listing Workgroup Report:

The Listing Workgroup updated the full Committee on the progress it has made during conference calls held since the Herndon meeting. Workgroup members also described the values and limitations of the conference call format, and made suggestions on how to ensure effective workgroup discussions (for the benefit of the other Committee workgroups just getting started).

After reorganizing the brainstormed list of issues that were identified in Herndon, the Listing Workgroup has focused primarily on the appropriate comprehensiveness and effective management of 303(d) lists. The workgroup told the Committee it has begun the process of identifying options to address the associated issues and has made the most progress on three general categories of issues: national consistency versus state flexibility, categories of impairment, and waters that are expected to meet water quality standards without TMDLs.

National Consistency versus State Flexibility

The Listing Workgroup proposed that a certain amount of national consistency is necessary but that there are certain areas where flexibility is appropriate. The Committee agreed that both consistency and flexibility are needed in the listing process and, during the discussion, identified several areas where national consistency would be useful:

- Listing criteria

- Water quality standards for toxics in multiple states that share a waterbody (e.g., Great Lake)--dischargers to the same waterbody should be subject to identical water quality standards
- Waters covered by fish advisories--either list them in all States or in no States
- Maximum contaminant level (MCL) violations
- Presentation/documentation of decisions (including the decision not to list)
- Minimum acceptable data quality levels

The Committee also identified areas in which flexibility should be supported:

- Water quality standards that account for climatic or geographic variability
- Prioritization and targeting of TMDL development for listed waters.

Other points made by the Committee during this discussion included:

- A fundamental dilemma associated with listing is that water quality standards as well as monitoring techniques are inconsistent from one state to the next.
- The purpose of national consistency should be to allow the public to obtain a realistic "snapshot" of water quality conditions in their state and across the country. For this reason, a core requirement for listing should be a consistent format for presenting information contained in the lists.
- National consistency would help ensure that states are not penalized for implementing rigorous monitoring and water quality standards.
- Relatively more flexibility may be afforded in implementation activities as opposed to listing activities.

The Committee also spent time debating whether the recommendation that water quality standards and monitoring techniques be more consistent from one state to the next should be within the purview of the Committee's discussions (because other advisory bodies are also addressing these topics). It was generally agreed that the Committee may need to address these issues but that it shouldn't spend too much time debating the details, particularly because it is readily apparent that changes in these programs are needed for a strong TMDL program.

Categories of Impairment

In this session, the Committee examined two broad questions: (1) *Are waters affected solely by nonpoint sources to be included on the 303(d) list* and (2) *How should States give meaning to narrative criteria, designated uses, and anti-degradation policies in the listing process*?

To address the first question, the Committee reviewed the 303(d)(1)(A) statutory language and discussed EPA's current interpretation of the statute: 303(d) must be read in the context of 303(a) and 303(e) and therefore applies to waters affected by nonpoint sources. Geoff Grubbs emphasized that EPA's position on this issue is unlikely to change but acknowledged that it is an important item to address. During the discussion, the Committee raised the following two points:

- Attributing an impairment to point/nonpoint sources during listing is difficult and resource-intensive.
- Since TMDLs are the "technical backbone" of the watershed management approach, removing nonpoint source only waters from 303(d) listing consideration would deny protection to many important water resources.

The Listing Workgroup indicated generally that it did not intend to spend a great deal of time addressing the issue of whether waters affected solely by nonpoint sources should be included

on the 303(d) list. It was agreed that an informal group of Committee members would develop options and discussions on this point.

The Committee then turned to the second question: how should listing decisions be made in the absence of specific numeric criteria. Several members noted that for many narrative criteria (e.g., biocriteria) and designated uses (e.g., recreation, fisheries), existing standards are insufficient or inappropriately designed. As a result, it is difficult to determine when a standard has been violated and, therefore, when a water should be listed. The Committee also struggled to understand how an anti-degradation policy can be used to demonstrate a water quality standard violation and to define threatened waters.

Expected to Meet

The Listing Workgroup made it clear that its discussion of the "expected to meet" issue is still a work in process and its final recommendations will necessarily depend on outcomes of other Committee deliberations. In this discussion, the Committee considered: (1) whether any escape from listing was lawful (i.e, could "expected to meet" waters be exempted from listing); and (2) if/how current "expected to meet" criteria for not listing impaired waters might be expanded/modified to include other activities that help improve water quality. The following points were made during the Committee discussion:

On "escape"

- Positive behaviors/activities that improve water quality should be encouraged. If being listed carries a stigma, then perhaps such activities should be rewarded by a listing exemption.
- There may be no lawful escapes from listing. (Note: this is not EPA's current position.) The stigma associated with being listed forces change and action. It is important to get all waters into the system.
- If listing all impaired waters is preferred/required, those other processes that are expected to improve water quality should be recognized (e.g., via a "segmented" list approach or by setting TMDL development priorities/targeting schedules accordingly). For example, the 303(d) list could be broken into sub-lists, one of which would queue up waters for TMDL development and another which would track "expected to meet" waters. The lists would be treated differently and would also be perceived differently. Waters subject to some other process (e.g., Forest Management and Habitat Conservation Planning) that satisfy certain "expected to meet" criteria are placed on the second sub-list (or "watch" list). If such waters can meet standards (or show water quality improvements) within a given timeframe, they stay on the "watch" list. If they fail to meet some agreed-to goal, they move to the regular 303(d) list.

On expanding "expected to meet" criteria

- If a waterbody is moving toward water quality attainment, then it should be considered an "expected to meet" water.
- Reasonable level of assurances for non-TMDL activities need to be established.
- "Expected to meet" determinations can only be made on a site-specific basis. Blanket approval should not be given to all Habitat Conservation Plans or all Forest Management Plans. Best professional judgment can be used to determine sufficiency.
- A suitable level of progress toward water quality attainment should be demonstrated in a specific timeframe.

Ex Officio Comments

Following the discussions on the various Listing Workgroup issues, each ex officio member was given a chance to comment. One member pointed out that the Committee should remember that there are other laws (e.g, the National Environmental Policy Act) that affect activities in watersheds. Another member urged the Committee to address the time frame for listing (two years versus five) and to address the overlapping nature of the 303(d) and 305(b) (as well as other) lists. The importance of recognizing the need for quality assurance/quality control of listing data was also mentioned.

Public Comment:

Don Moore, retired fishery biologist, shared with the Committee his personal history of growing up near Cape Cod and gathering oysters in Galveston Bay. He expressed his regret that the water quality in both those areas has deteriorated over time. Mr. Moore also told the Committee that the TMDL program shouldn't be directed solely toward river basins, but should also be used to address water quality problems in estuaries. He also expressed his belief that the nearshore areas of estuaries are most sensitive to pollution because that is where the wildlife are found and that is also where most recreation takes place. Mr. Moore also spoke briefly of the limitations of using fecal coliform indicators to assess water quality conditions.

Randall Wilburn, Director of Water Quality Programs for the State of Texas, said that TMDLs must include implementation requirements, that "good science" really means using the best available data and tools, and that the Committee should not spend too much time on the standards issue.

Myron Hess, an attorney with Henry, Lowerre, Johnson, Hess, and Frederick, told the Committee he has represented a variety of environmental groups in litigation efforts and feels that the TMDL process is a great mystery to the general public. He emphasized that it is important to explain these issues to non-experts and to have bottom-up TMDL development. He also said the Committee does need to address the issue of interpreting narrative standards because such interpretation is a prerequisite for TMDL development. He also reminded the Committee that rapid progress must be made in the area of TMDL development because activities in some states have languished for so long.

Total Maximum Daily Load (TMDL) Program

FEDERAL ADVISORY COMMITTEE ON TOTAL MAXIMUM DAILY LOADS (TMDLs)

Summary of Meeting Two

February 19-21, 1997

Galveston Island Hilton
Galveston, Texas

Friday February 21, 1997

Science and Tools Workgroup Report:

The Science and Tools Workgroup briefed the Committee on its progress since the Herndon meeting. As with the other workgroups, the Science and Tools workgroup is still fairly early in its discussions. The workgroup has thus far spent quite a bit of its time discussing ideas related to "degree of rigor" issues and to the challenge of having to make TMDL listing and development decisions in the face of scientific uncertainty (e.g, inadequate monitoring data, lack of appropriate water quality models). Generally, workgroup members feel that attaining a high level of scientific rigor is important because, among other reasons, a certain level of science is needed to obtain "buy-in" from those who will be affected by the development and implementation of TMDLs. Several points were made by members of the Committee in response to the workgroup's presentation on this "degree of rigor" issue, including the following:

- It is difficult to reconcile the desire for high scientific rigor with the need to expeditiously develop TMDLs.
- The Clean Water Act addresses the problem of inadequate scientific data by requiring that a margin of safety be included in the load allocations of every TMDL.
- The degree of rigor concept is also a "burden of proof" question. There are costs associated with developing a TMDL (e.g., gathering the data, conducting the analysis), but there are also costs in not acting (e.g., beaches and shellfish beds are closed, loss of recreational dollars). The public shouldn't have to bear the burden of perfect science.
- States should not be forced to rely on overly simple models or other tools in an effort to speed TMDL development. The end result of such a policy would be that those

who are called on to make costly load reductions will challenge the technical analysis in court.

- The collection and storage of monitoring data should be standardized. The data also need to be collected in such a manner that it is easier to use them to develop TMDLs and to determine if water quality standards are being met.
- The margin of safety concept included in the Clean Water Act is harmful as currently interpreted. In situations of higher uncertainty, and high load reduction costs, the margin of safety requirement makes TMDLs more onerous. A phased (iterative) approach to TMDL development, with a smaller margin of safety, may be preferable in these situations.
- The Committee needs to remember that farmers have no way of passing their increased costs on to consumers (as can industry). Farmers have already made great strides in reducing their impact to waterbodies (e.g., using modern tillage practices, better handling of livestock) and the Committee needs to be careful to not make recommendations that burden them to the point that they are forced out of business.

With the "degree of rigor" discussions serving as a backdrop, the Science and Tools workgroup next told the Committee that it has decided to focus its activities between now and June on making suggestions (short- and long-term) to EPA for priority tool development and science initiatives. This will help focus its discussions over the next several months and will also provide EPA with information that it can use to start planning its investments.

The workgroup provided an initial list of ideas for priority tool development and science initiatives to the full Committee and asked for comments as well as ideas for additional areas of investment. The following is the combined list of initiatives that the workgroup will attempt to prioritize in its recommendations to EPA:

- New numeric criteria (especially for nutrients and microbials)
- Develop a non-quantitative, consensus building decision-making technique (for certain situations)
- Develop and provide training to States, Tribes, and EPA staff
- Improve standardization of monitoring data (includes format and QA/QC for data, and the manner of collecting data); ensure consistency with State water quality standards to ensure data are useful)
- Develop ways to communicate TMDLs and the listing process to stakeholders (standardize and simplify how information is presented)
- Develop pilot projects to investigate feasibility and effectiveness of models, new approaches to TMDL development
- Further develop the phased approach (how it can address uncertainty)
- Develop/enhance models (in particular, develop better probabilistic models)
- Investigate how uncertainty can be effectively incorporated in MOS
- Develop tools that assess the effectiveness of results
- Develop strategies to reduce "waste" in monitoring; clarify who does what (i.e., using citizen data, etc)
- Develop tools and procedures to allow decisions to be made under uncertainty
- Assist states in making assumptions (which are necessary regardless of the amount of data available), and documenting them
- Promote standardization of data collected at federal agencies
- Develop wet weather water quality standards
- Develop templates/decision matrices for presenting information on TMDL development decisions
- Enhance public education and outreach efforts/involve stakeholders
- Improve data storage and retrieval processes
- Research to better relate the physical characteristics of stream channels to loading
- Develop more information on BMP effectiveness
- Gather more information on cost of TMDL development and/or its implementation
- Develop case studies; enhance information transfer

The Science and Tools workgroup plans to discuss ways to prioritize this list and may choose to survey the full Committee so that members can indicate what they believe to be the most important needs for research and tool development.

Workgroup Process Review:

Following the Science and Tools discussion, the Committee spent some time discussing the workgroup process and other issues related to maximizing the effectiveness of the Committee. After some discussion, the Committee agreed that the Science and Tools, and Listing Workgroups should get as far as possible in identifying preferred options by the June meeting and that the Framework Workgroup would have an important role to play in addressing overlapping issues and pulling things together at the end. The Committee also acknowledged that it will be difficult to reach full consensus on some issues until it has had a chance to address all of the issues.

The Committee also discussed whether there needed to be any changes to the workgroup membership. After a short discussion, Susan Sylvester joined the Approval Workgroup and Fred Andes and Linda Shead volunteered to sit in on the Science and Tools workgroup calls (but not to participate as workgroup members).

The Committee also discussed what its policy should be on the public distribution of workgroup materials that are in various stages of development. Some members raised the concern that they will be drafting options they don't necessary agree with or that have not yet been reviewed by their workgroup, while others were strongly in favor of having all material available to the public. Eventually, the Committee agreed that all materials should be available to the public on request, that the documents should be appropriately labeled (e.g., for discussion purposes only), and that they should not be attributed to any individual Committee members.

The Committee next addressed the issue of having substitutes sitting in on the workgroup conference calls when a member is unable to attend. After some deliberation, the Committee agreed to try a pilot approach that would allow Dale Givens, Jane Nishida, and Susan Sylvester to have a substitute dial in to the calls in those instances where it is impossible for them to attend. (The Committee agreed to make an exception for these three members because of the extreme time constraints placed upon them by the state legislative process and because of the importance of state participation). The following rules will apply to this pilot approach:

- Only one person can serve as a substitute (i.e., it can't be someone different for each call).
- The facilitator must be notified in advance that a substitute will be dialing in to the call.
- The substitute can only serve a role in providing information and should not actively attempt to influence workgroup discussions.
- A substitute can only stand in for a member during conference calls, not during a full Committee meeting.
- The Committee will revisit this policy at the June meeting.

The Committee also agreed to continue its policy of allowing workgroup members to have a colleague sit in and silently take notes during calls that members cannot attend.

Wrap-up and Next Steps:

Ms. Prothro notified Committee members that the facilitators will be calling within a week or two to arrange dates and times for future conference calls. A conference call schedule will then

be distributed to each Committee member.

The next full Committee meeting will take place June 11-13 in Milwaukee, Wisconsin, with optional workgroup meetings occurring, if necessary depending on each workgroup, on the evening of June 10. Presentations will be made at the Milwaukee meeting by the Listing, Science and Tools, Approval, and Management and Oversight Workgroups and there will be time reserved for two public comment periods. The purpose of the Milwaukee meeting will be to identify as many options as possible for Listing and Science and Tools issues and to begin to organize and discuss Approval and Management and Oversight issues.

Adjournment:

Ms. Prothro then adjourned the meeting with a second from the Committee.

Approval of Meeting Summary:

This summary of the second meeting of the Federal Advisory Committee on Total Maximum Daily Loads was reviewed and approved by the full Committee at the September 3-5 meeting in Portland, Oregon.

_____

Corinne S. Wellish Date
Designated Federal Official